

Agricultural Chemical Usage

The 2003 Chemical Use Summaries for Fruit and Field Crops provide pesticide use data on 6 Michigan fruit crops, corn, and potatoes. Michigan State University's Project Generating Research and Extension to meet Environmental and Economic Needs (GREEN) funded the data collection for grapes to maintain the published data series for that crop. Fruit chemical use statistics are published every other year alternating with vegetable chemical use

statistics. The entire series of chemical usage statistics since 1990 for Michigan and the United States can be found at <http://www.usda.gov/nass>. A list of associated trade names is provided following the chemical application tables as an aid in reviewing the data. The list does not mean to imply use of any specific tradename.

Apples: Agricultural chemical applications, 2003 ¹

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D	6	1.2	0.86	1.08	2.9
2,4-D, Dimeth, salt	10	1.0	0.76	0.76	3.0
Diuron	8	1.2	0.98	1.20	4.1
Glyphosate	32	1.2	0.81	1.02	13.6
Paraquat	8	1.3	0.54	0.71	2.5
Simazine	10	1.1	1.65	1.84	7.5
Terbacil	5	1.0	0.52	0.53	1.1
Insecticides					
Abamectin	9	1.1	0.01	0.01	0.1
Acetamiprid	9	1.0	0.07	0.08	0.3
Azinphos-methyl	86	4.3	0.68	2.91	105.3
Benzoic acid	34	1.6	0.17	0.29	4.1
Bifenazate	11	1.3	0.43	0.57	2.6
Bt (Bacillus thur.) ²	14	2.5			
Carbaryl	39	1.5	1.07	1.70	27.7
Chlorpyrifos	57	1.1	0.96	1.14	27.2
Clofentezine	14	1.1	0.12	0.14	0.8
Dimethoate	4	2.0	0.85	1.72	2.9
Endosulfan	7	1.2	1.11	1.38	4.2
Esfenvalerate	41	1.5	0.04	0.06	1.0
Fenbutatin-oxide	1	1.0	0.96	0.98	0.4
Fenpropathrin	17	1.5	0.27	0.41	2.9
Hexythiazox	3	1.1	0.12	0.14	0.2
Imidacloprid	38	1.5	0.05	0.07	1.2
Indoxacarb	3	1.0	0.06	0.06	0.1
Methomyl	19	1.3	0.81	1.12	8.9
Permethrin	9	1.1	0.15	0.16	0.6
Petroleum distillate	20	1.0	18.62	19.97	169.5
Phosmet	69	2.5	1.49	3.75	109.5
Pyridaben	26	1.1	0.14	0.17	1.9
Spinosad	15	1.5	0.10	0.16	1.0
Thiamethoxam	10	1.3	0.05	0.07	0.3

See footnote(s) at end of table.

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Apples: Agricultural chemical applications, 2003 ¹ (continued)

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 lbs</i>
Fungicides					
Basic copper sulfate	21	1.2	0.92	1.15	10.0
Calcium polysulfide	1	1.5	8.21	12.71	6.6
Captan	82	5.2	1.80	9.51	325.7
Copper hydroxide	8	1.2	1.41	1.78	6.2
Copper oxychlor. Sul.	3	1.3	0.47	0.61	0.7
Copper oxychloride	18	1.1	2.26	2.62	19.8
Copper sulfate	6	1.6	0.73	1.17	2.7
Cyprodinil	12	1.5	0.12	0.19	1.0
Dodine	3	1.3	0.97	1.28	1.7
Fenarimol	13	3.0	0.05	0.16	0.8
Kresoxim-methyl	31	1.8	0.11	0.21	2.7
Mancozeb	67	4.0	2.54	10.32	292.1
Maneb	3	3.9	3.24	12.83	17.4
Metiram	19	3.0	2.72	8.41	67.1
Myclobutanil	43	2.8	0.11	0.30	5.5
Oxytetracycline	2	1.0	0.23	0.23	0.2
Streptomycin	32	1.8	0.13	0.23	3.1
Streptomycin sulfate	(³)	2.4	0.18	0.46	0.1
Sulfur	29	4.1	4.17	17.24	211.2
Thiophanate-methyl	8	2.3	0.45	1.09	3.5
Thiram	7	2.8	2.36	6.70	19.4
Triadimefon	18	2.7	0.06	0.16	1.2
Trifloxystrobin	26	1.7	0.06	0.10	1.1
Ziram	31	2.8	2.98	8.60	112.5
Other chemicals					
Benzyladenine	7	1.0	0.03	0.04	0.1
Butenic acid hydro.	2	1.0	0.08	0.08	0.1
Gibberellic acid	3	1.0	0.01	0.01	(⁴)
Gibberellins A4A7	7	1.0	0.007	0.007	(⁴)
NAA	25	1.2	0.02	0.02	0.2
NAD	2	1.0	0.08	0.08	0.1
Prohexadione calcium	12	1.6	0.15	0.24	1.3

¹ Preliminary bearing acres in 2003 for Michigan were 42,000 acres.

² Rates and total applied are not available because amounts of active ingredient are not comparable between products.

³ Area applied is less than 0.5 percent.

⁴ Total applied is less than 50 lbs.

Blueberries: Agricultural chemical applications, 2003 ¹

Agricultural Chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 lbs</i>
Herbicides					
Diuron	32	1.0	1.39	1.42	6.9
Glyphosate	15	1.2	0.66	0.85	1.9
Norflurazon	7	1.0	1.17	1.23	1.3
Paraquat	9	1.0	0.25	0.25	0.3
Simazine	21	1.0	1.65	1.76	5.7
Terbacil	24	1.0	0.61	0.62	2.3
Insecticides					
Azinphos-methyl	78	1.6	0.51	0.82	9.8
Carbaryl	28	2.0	1.49	3.10	13.2
Esfenvalerate	9	1.1	0.05	0.05	0.1
Imidacloprid	4	1.2	0.09	0.11	0.1
Malathion	37	1.9	2.17	4.14	23.5
Methomyl	30	1.3	0.59	0.80	3.7
Phosmet	75	2.3	0.86	2.05	23.6
Fungicides					
Azoxystrobin	6	1.4	0.19	0.28	0.2
Benomyl	8	1.6	0.50	0.82	1.0
Captan	48	2.3	2.04	4.88	36.4
Chlorothalonil	33	1.5	2.55	3.85	19.6
Fenbuconazole	51	1.7	0.09	0.16	1.3
Fosetyl-al	9	1.5	3.86	5.99	8.0
Pyraclostrobin	16	1.5	0.17	0.27	0.6
Thiophanate-methyl	42	1.7	0.69	1.23	7.9
Ziram	38	2.5	2.76	6.95	40.5

¹ Preliminary bearing acres in 2003 for Michigan were 15,400 acres.

Cherries, sweet: Agricultural chemical applications, 2003 ¹

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D	2	1.1	0.71	0.85	0.1
2,4-D, Dimeth. Salt	8	1.3	0.34	0.47	0.3
Glyphosate	27	1.1	0.59	0.66	1.4
Paraquat	7	1.0	0.40	0.43	0.3
Simazine	9	1.0	0.93	0.98	0.7
Insecticides					
Azinphos-methyl	68	2.9	0.44	1.30	7.2
Carbaryl	35	1.2	2.16	2.67	7.5
Chlorpyrifos	3	1.0	1.27	1.30	0.3
Permethrin	25	1.8	0.11	0.20	0.4
Fungicides					
Captan	17	1.6	1.59	2.62	3.7
Chlorothalonil	68	2.1	1.80	3.88	21.3
Copper hydroxide	13	1.0	2.45	2.47	2.5
Fenbuconazole	51	2.1	0.08	0.18	0.7
Ferbam	29	2.6	1.84	4.91	11.5
Iprodione	3	1.2	0.82	1.05	0.3
Myclobutanil	6	1.2	0.11	0.14	0.1
Propiconazole	15	1.5	0.11	0.17	0.2
Sulfur	72	4.2	5.28	22.52	131.5
Tebuconazole	55	2.6	0.14	0.38	1.7
Thiophanate-methyl	5	1.8	0.56	1.02	0.4
Ziram	30	1.7	2.38	4.11	9.9
Other chemicals					
Ethephon	59	1.0	0.50	0.52	2.5

¹ Bearing acres in 2003 for Michigan were 8,100 acres.

Cherries, tart: Agricultural chemical applications, 2003 ¹

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D	3	1.1	0.70	0.83	0.6
2,4-D, Dimeth. Salt	7	1.0	0.59	0.60	1.1
Diuron	3	1.1	0.92	1.08	0.8
Glyphosate	30	1.1	0.73	0.81	6.6
Paraquat	13	1.0	0.46	0.49	1.7
Simazine	17	1.0	1.46	1.52	6.9
Terbacil	(²)	1.0	0.25	0.25	0.1
Insecticides					
Azinphos-methyl	70	2.7	0.45	1.23	23.4
Carbaryl	5	1.5	1.99	3.02	3.7
Chlorpyrifos	12	1.1	0.64	0.74	2.4
Esfenvalerate	28	1.9	0.03	0.05	0.4
Lambda-cyhalothrin	10	1.3	0.03	0.04	0.1
Permethrin	9	1.6	0.10	0.17	0.4
Phosmet	67	1.9	0.90	1.79	32.3
Fungicides					
Basic copper sulfate	3	2.5	0.80	2.01	1.6
Captan	30	2.4	1.22	3.04	24.8
Chlorothalonil	83	3.0	1.86	5.58	125.0
Copper hydroxide	5	1.7	1.50	2.63	3.4
Copper oxychloride	2	2.7	1.71	4.68	2.6
Copper sulfate	1	1.7	0.63	1.13	0.5
Dodine	10	1.6	0.66	1.07	2.7
Fenbuconazole	37	1.8	0.08	0.15	1.5
Myclobutanil	21	1.7	0.08	0.14	0.8
Propiconazole	4	1.1	0.10	0.11	0.1
Sulfur	73	4.9	5.56	27.31	538.2
Tebuconazole	70	3.3	0.11	0.36	6.8
Ziram	5	1.9	2.15	4.16	5.8
Other chemicals					
Ethephon	80	1.1	0.20	0.23	5.1
Gibberellic acid	33	1.3	0.01	0.02	0.2

¹ Bearing acres in 2003 for Michigan were 27,000 acres.

² Area applied is less than 0.5 percent.

Grapes, all: Agricultural chemical applications, 2003 ¹

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 lbs</i>
Herbicides					
Glyphosate	35	1.1	0.54	0.61	2.7
Oryzalin	1	1.4	2.35	3.47	0.5
Paraquat	29	1.6	0.42	0.67	2.5
Simazine	6	1.0	1.08	1.14	0.9
Insecticides					
Azinphos-methyl	63	1.9	0.63	1.21	9.6
Carbaryl	38	1.5	1.41	2.22	10.7
Fenprothrin	43	1.8	0.16	0.29	1.6
Phosmet	26	2.4	1.07	2.58	8.3
Fungicides					
Azoxystrobin	15	1.3	0.19	0.27	0.5
Kresoxim-methyl	1	1.6	0.10	0.16	(²)
Mancozeb	81	3.2	2.06	6.63	67.8
Metalaxyl	3	1.1	0.06	0.07	(²)
Myclobutanil	32	1.8	0.08	0.15	0.6
Sulfur	6	2.3	3.76	8.79	6.5
Tebuconazole	63	2.3	0.11	0.24	1.9
Triadimefon	4	2.2	0.06	0.14	0.1
Ziram	76	2.8	2.42	6.83	65.8

¹ Bearing acres in 2003 for Michigan were 12,600 acres.

² Total applied is less than 50 lbs.

Peaches: Agricultural chemical applications, 2003 ¹

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D	3	1.0	0.48	0.48	0.1
Diuron	18	1.0	1.26	1.37	1.2
Glyphosate	20	1.0	0.78	0.84	0.9
Paraquat	26	1.1	0.54	0.64	0.8
Simazine	5	1.2	1.01	1.25	0.3
Terbacil	17	1.0	1.12	1.13	0.9
Insecticides					
Azinphos-methyl	39	2.6	0.66	1.75	3.4
Carbaryl	26	1.5	1.88	2.93	3.8
Chlorpyrifos	12	1.0	1.56	1.65	1.0
Endosulfan	19	1.9	1.28	2.47	2.4
Esfenvalerate	55	2.6	0.04	0.10	0.3
Imidacloprid	3	1.0	0.09	0.09	(²)
Lambda-cyhalothrin	15	1.9	0.03	0.07	(²)
Methomyl	15	1.1	0.50	0.56	0.4
Permethrin	31	2.5	0.13	0.34	0.5
Petroleum distillate	2	1.0	7.77	7.77	0.8
Phosmet	30	2.3	1.44	3.44	5.2
Fungicides					
Basic copper sulfate	6	1.0	1.43	1.53	0.5
Captan	39	2.7	1.96	5.42	10.6
Copper hydroxide	11	1.1	1.79	2.05	1.1
Copper oxychloride	5	1.0	2.78	2.78	0.6
Copper sulfate	5	1.3	1.19	1.62	0.4
Dodine	22	3.1	0.33	1.02	1.1
Fenbuconazole	72	3.0	0.09	0.28	1.0
Ferbam	3	1.0	1.92	1.92	0.2
Iprodione	4	1.2	0.64	0.79	0.2
Myclobutanil	20	1.5	0.09	0.14	0.1
Oxytetracycline	21	1.9	0.14	0.27	0.3
Propiconazole	28	1.9	0.10	0.20	0.3
Sulfur	69	4.7	4.91	23.15	79.9
Tebuconazole	28	2.4	0.16	0.39	0.5
Thiophanate-methyl	4	1.6	0.70	1.18	0.2
Ziram	5	1.0	3.67	3.67	0.9
Other chemicals					
E-8 Dodecenyyl acetate	13	1.2	0.04	0.05	(²)
Z-8 Dodecanol	13	1.2	0.006	0.007	(²)
Z-8 Dodecen acetate	13	1.2	0.70	0.85	0.5

¹ Bearing acres in 2003 for Michigan were 5,000 acres.

² Total applied is less than 50 lbs.

Fertilizer applications: Corn, 2003 ¹

Fertilizer	Symbol	Area applied	Applications	Rate per application	Rate per crop year	Total applied
		<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>Million pounds</i>
Nitrogen	N	99	2.0	61	123	281.8
Phosphate	P ₂ O ₅	86	1.0	46	48	95.3
Potash	K ₂ O	88	1.2	79	100	201.6

¹ Planted acres in 2003 were 2.30 million acres.

Fertilizer applications: Fall potatoes, 2003 ¹

Fertilizer	Symbol	Area applied	Applications	Rate per application	Rate per crop year	Total applied
		<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>Million pounds</i>
Nitrogen	N	100	3.4	54	184	8.5
Phosphate	P ₂ O ₅	98	1.5	59	89	4.0
Potash	K ₂ O	98	1.5	135	203	9.1

¹ Planted acres in 2003 were 46,000 acres.

Agricultural chemical applications: Corn, 2003 ¹

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 pounds</i>
Herbicides:					
2,4-D	8	1.0	0.46	0.51	94
Acetochlor	19	1.0	1.98	1.98	876
Altrazine	68	1.0	1.14	1.16	1,814
Clopyralid	10	1.0	0.12	0.12	27
Dicamba	6	1.0	0.26	0.26	36
Dicamba, Dimet. Salt	7	1.0	0.13	0.13	22
Diflufenzopyr-sodium	8	1.0	0.05	0.05	10
Dimethenamid	(²)	1.0	0.96	0.96	21
Flumetsulam	14	1.0	0.04	0.04	13
Glyphosate	22	1.2	0.73	0.89	443
Mesotrione	7	1.0	0.15	0.15	23
Metolachlor	6	1.0	1.34	1.34	181
Nicosulfuron	10	1.0	0.02	0.02	5
Pendimethalin	12	1.0	1.11	1.11	317
Rimsulfuron	11	1.0	0.01	0.01	3
S-Metolachlor	23	1.0	1.39	1.39	735
Thifensulfuron	4	1.0	0.006	0.006	1
Insecticides					
Bifenthrin	4	1.0	0.05	0.05	4
Chlorpyrifos	5	1.0	1.28	1.28	146

¹ Planted acres in 2003 were 2.3 million acres.

² Area applied is less than 0.5 percent.

Agricultural chemical applications: Fall potatoes 2003 ¹

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per acre</i>	<i>Pounds per acre</i>	<i>1,000 pounds</i>
Herbicides					
Glufosinate-ammonium	6	1.2	0.24	0.30	1
Glyphosate	2	1.0	1.29	1.29	1
Linuron	35	1.0	0.64	0.64	10
Metolachlor	22	1.0	1.19	1.19	12
Metribuzin	54	1.1	0.32	0.36	9
Pendimethalin	27	1.8	0.48	0.89	11
Rimsulfuron	5	1.2	0.02	0.02	(²)
S-Metolachlor	45	1.0	1.14	1.14	24
Insecticides					
Cyfluthrin	43	1.3	0.02	0.03	1
Dimethoate	5	1.1	0.45	0.50	1
Endosulfan	2	1.0	0.68	0.71	1
Esfenvalerate	23	1.6	0.03	0.05	1
Imidacloprid	45	1.1	0.17	0.19	4
Methamidophos	5	1.1	0.71	0.80	2
Oxamyl	7	1.1	1.02	1.13	4
Permethrin	1	2.8	0.10	0.28	(²)
Thiamethoxam	27	1.0	0.17	0.17	2
Fungicides					
Azoxystrobin	43	1.7	0.10	0.18	4
Chlorothalonil	83	8.9	0.69	6.14	236
Copper hydroxide	4	4.3	0.70	3.00	5
Cymoxanil	4	2.3	0.11	0.27	1
Mancozeb	71	2.9	1.30	3.87	126
Mefenoxam	36	1.9	0.13	0.26	4
Pyraclostrobin	6	1.2	0.10	0.12	(²)
Triphenyltin hydrox.	32	1.1	0.13	0.15	2
Other chemicals					
Diquat	68	1.2	0.36	0.45	14
Maleic hydrazide	35	1.0	2.15	2.15	35
Paraquat	6	1.0	0.32	0.32	1

¹ Planted acres in 2003 were 46,000 acres.

² Total applied is less than 500 lbs.

Agricultural chemicals: Common and trade names by class

Herbicides

Common name	Trade name	Common name	Trade name
2, 4-D	several names	Mesotrione	Callisto, Camix, Lumax
2, 4-D, Dimeth. salt	Saber, Weedar, Weedaxe	Metolachlor	Bicep, Dual, Turbo
Acetochlor	several names	Metribuzin	Axiom, Lexone, Sencor, Turbo
Atrazine	several names	Nicosulfuron	Accent, Basis, Celebrity, DPX-79406, Steadfast
Clopyralid	Accent, Curtail, Hornet, Stinger	Norflurazon	Solicam
Dicamba	several names	Oryzalin	Surflan
Dicamba, Dimet. salt	Distinct, Sterling	Paraquat	Cyclone, Gramoxone, Starfire, Surefire
Diflufenzopyr-sodium	Celebrity Plus, Distinct	Pendimethalin	Pendimax, Prowl
Dimethenamid	Frontier, Guardsman, LeadOff	Rimsulfuron	Accent, Basis, DPX-79406, Matrix, Steadfast
Diuron	Direx, Karmex, Krovar	S-Metolachlor	Bicep, Camix, Cinch, Dual, Expert, Lumax
Flumetsulam	Accent Gold, Bicep, Hornet, Python	Simazine	Caliber, Princep, Sim-Trol, Simazine
Glufosinate-ammonium	Liberty, Rely	Terbacil	Sinbar
Glyphosate	several names	Thifensulfuron	Ally, Basis, Harmony, Pinnacle, X-TRA Cheyenne
Linuron	Linex, Lorox		

Insecticides

Abamectin	Agri-Mek, Clinch Ant Bait	Fenpropathrin	Danitol
Acetamiprid	Assial 70 WP	Hexythiazox	Savey
Azinphos-methyl	Azinphos-M, Guthion, Sniper	Imidacloprid	Admire, Leverage, Provado, Trimax
Bacillus thuringiensis	several names	Indoxacarb	Avaunt
Benzoic acid	Intrepid	Lambda-cyhalothrin	Olive, Warrior
Bifenazate	Acramite	Malathion	Agway Fruit Tree Spray, Cythion, Fyfanon, Malathion
Bifenthrin	Capture, Double Threat	Methamidophos	Monitor
Carbaryl	Agway Fruit Tree Spray, Carbaryl, Sevin	Methomyl	Lannate
Chlorpyrifos	Chlorpyrifos, Dursban, Lorsban, Nufos	Oxamyl	Vydate
Clofentezine	Apollo	Permethrin	several names
Cyfluthrin	Aztec, Baythroid, Leverage	Petroleum distillate	several names
Dimethoate	Cygon, Digon, Dimate, Dimethoate	Phosmet	Imidan
Endosulfan	Endosulfan, Phaser, Thiodan, Thionex, Endocide	Pyridaben	Nexter, Pyramite, Sanmite
Esfenvalerate	Asana	Spinosad	NAF-550 Fruit Fly Bait, SpinTor, Success
Fenbutatin-oxide	Vendex	Thiamethoxam	Actara

--continued

Agricultural chemicals: Common and trade names by class (continued)

Fungicides			
Common name	Trade name	Common name	Trade name
Azoxystrobin	Abound, Amistar, ICIA5504, Quadris	Mancozeb	several names
Basic copper sulfate	several names	Maneb	Agasco MN, Amazin, Dithane, Manex
Benomyl	Benlate	Mefanoxam	Flourish, Flouronil, Ridomil
Calcium polysulfide	Lime Sulfur Solution, Orthorix, Polysul, Sulforix	Metalaxyl	Ridomil
Captan	Agway Fruit Tree Spray, Captan, Captec, Ortho Home Orchard Spray	Metiram	Polyram
Chlorothalonil	several names	Myclobutanil	Laredo, Nova, RH-144228, Rally
Copper hydroxide	several names	Oxytetracycline	Mycoshield
Copper oxychloride	C-O-C-S, Microspere	Propiconazole	Orbit
Copper oxychloride sulfate	C-O-C-S, Copodust, Oxcyp	Pyraclostrobin	Headline
Copper sulfate	Basicop, Bluestone	Streptomycin	Agri-Mycin, Streptomycin
Cymoxanil	Curzate, Manex	Streptomycin sulfate	Streptomycin sulfate
Cyprodinil	Switch, Vanguard	Sulfur	several names
Dodine	Cyprex, Dodine, Syllit	Tebuconazole	Elite
Fenarimol	Rubigan	Thiophanate-methyl	Topsin
Fenbuconazole	Enable, Indar	Thiram	Thiram
Ferbam	Carbamate, Ferbam	Triadimefon	Bayleton
Fosetyl-al	Aliette	Trifloxystrobin	Flint
Iprodione	Rovra	Triphenyltin hydrox	April Tin, Super Tin
Kresoxim-methyl	Sovran	Ziram	Ziram
Other			
Benzyladenine	Accel, Perlan, Promalin, Typy	Maleic hydrazide	Maleic hydrazide, Royal, Sprout Stop, Super Sprout Stop
Butenoic acid hydrochloride	Retain	NAA	Alphaspra, Fruit-Fix, Fruitone, Kling Tite, Stop Drop
Diquat	Diquat, Reglone	NAD	Amid-Thin
E-8-Dodecenyl acetate	Checkmate, Consep, Isomate	Prohexadione calcium	Apogee
Ethephon	Ethephon, Ethrel	Z-8-Dodecanol	Checkmate, Consep, Isomate
Gibberellic acid	several names	Z-8-Dodecenyl acetate	Checkmate, Consep, Isomate
Gibberellins A4A7	Accel, Perlan, Promalin, TypRus, Typy		

Commercial fertilizer consumption: 1999-2003 ¹

Item	Year ending June 30				
	1999	2000	2001	2002	2003
	<i>Short tons</i>	<i>Short tons</i>	<i>Short tons</i>	<i>Short tons</i>	<i>Short tons</i>
Primary plant nutrients					
Total N	263,948	249,543	238,810	240,680	238,296
N in multi-nutrients	62,713	57,104	55,076	55,048	60,449
Total P ₂ O ₅	94,890	87,001	85,873	84,734	85,485
P ₂ O ₅ in multi-nutrients	92,063	84,539	83,794	82,377	83,193
Total K ₂ O	211,739	202,481	184,568	189,200	189,463
K ₂ O in multi-nutrients	60,635	47,828	47,563	41,924	45,298
Total plant nutrients	570,576	539,024	509,251	514,615	513,243
Average analysis	43.1	42.9	42.6	43.1	40.1
Total nutrients in multi-nutrients	215,411	189,471	186,433	179,349	188,940
Selected single-nutrient materials					
Ammonium nitrate	9,533	5,622	6,287	5,405	7,856
Anhydrous ammonia	68,349	56,757	50,984	52,766	39,235
Nitrogen solutions	300,761	265,544	288,641	284,355	285,787
Urea	98,820	126,452	110,001	107,305	107,854
Ammonium sulfate	20,468	22,477	22,164	23,569	25,294
Concentrated superphosphate	4,880	4,966	3,945	4,984	4,515
Potassium chloride	244,519	250,410	221,427	236,720	231,668
Multiple-nutrient fertilizers					
N-P-K	388,303	361,992	366,861	334,670	265,924
N-P	124,833	115,616	122,840	129,900	133,062
N-K	27,386	22,281	24,353	27,096	34,853
P-K	5,526	4,561	4,771	3,831	2,828
Leading multiple-nutrient grades					
10-34-0	42,668	37,385	40,775	44,303	46,717
18-46-0	37,709	34,569	33,232	36,672	37,149
11-52-0	20,069	24,987	26,571	24,636	25,865
19-19-19	21,201	11,564	13,035	13,989	12,709
8-18-5			5,675	5,614	8,703
28-3-3	5,265	5,595	4,517	7,761	7,654
Fertilizer consumption by classes					
Dry bulk single-nutrient	430,931	452,227	382,845	392,966	443,887
Dry bagged single-nutrient	7,581	7,453	14,862	23,385	40,127
Fluid single-nutrient	371,425	324,357	343,883	339,295	343,115
Dry bulk multiple-nutrient	283,761	259,482	243,576	223,668	231,005
Dry bagged multiple-nutrient	187,767	165,491	188,375	187,396	132,037
Fluid multiple-nutrient	76,463	79,476	86,874	84,433	73,625
Organics, secondary and micronutrients	37,943	39,220	24,729	31,883	84,679
Total	1,395,870	1,327,707	1,285,144	1,283,026	1,348,475

¹ Source: The Association of American Plant Food Control Officials